

## ABSTRACT

5 Tissue culture medium such as porous frameworks and even open surface multidirectional porous frameworks may be used to provide uniform distribution of nourishment solutions, uniform interstitial voids as well as undistorted transport fields which may facilitate high volume yields of finished plants from cells, such as explants in a tissue culturing process. Further embodiments may include automating a tissue culturing process to reduce labor costs and increase uniformity of finished plants through tissue culture processes.